

Energy News

Energy News Summary

In his state of the union address President Obama continued to emphasize his administration's interest in taking meaningful action to address greenhouse gas emissions and climate change. The president called for a bipartisan, market-based solution to climate change (sounds like carbon tax or cap and trade), but let Congress know that if they do not act he will come up with executive actions to reduce greenhouse gas emissions and prepare for climate change. In the same section of the speech the president praised the production boom in the oil and gas sectors and pledged to reduce 'red tape' for oil and gas permitting. He then proposed establishing an Energy Security Trust, funded from oil and gas revenue, to drive research and introduce technology that would allow us to shift our cars, trucks and power plants from fossil fuels over the long-term. Finally, he proposed America invest in energy efficiency and cut in half the amount of energy wasted by homes and businesses.

The Energy Information Administration reported in Petroleum Supply Monthly that US production exceeded 7 million barrels per day in Nov. and Dec. of 2012, the highest production volume since Dec. 1992. Increasing production in North Dakota and Texas drove the increase over the past year: 2012 increase of 0.790 million barrels/day, the most ever in US recordkeeping. The EIA is forecasting an increase of 0.815 million barrels/day for 2013. The rise in US crude oil production (and a coincident drop in US consumption) has caused many consumers to ask why gasoline and diesel prices are still so high. Simple answer? Crude oil and, to a certain degree, refined products are fungible goods—they are traded and priced internationally. Increasing US production is relatively small compared to the total and increasing global demand for crude oil and refined products. An interesting bit of information; since the oil production boom began 6 years ago net US imports of refined products have gone from an average of 2.3 to -814 (net exporting) million barrels/day for an overall change of 3.1 million barrels/day (2007 → 2012). This illustrates the international nature of the crude oil and refined product markets and why the US is still tied to the international price structure.

Energy Price Overview

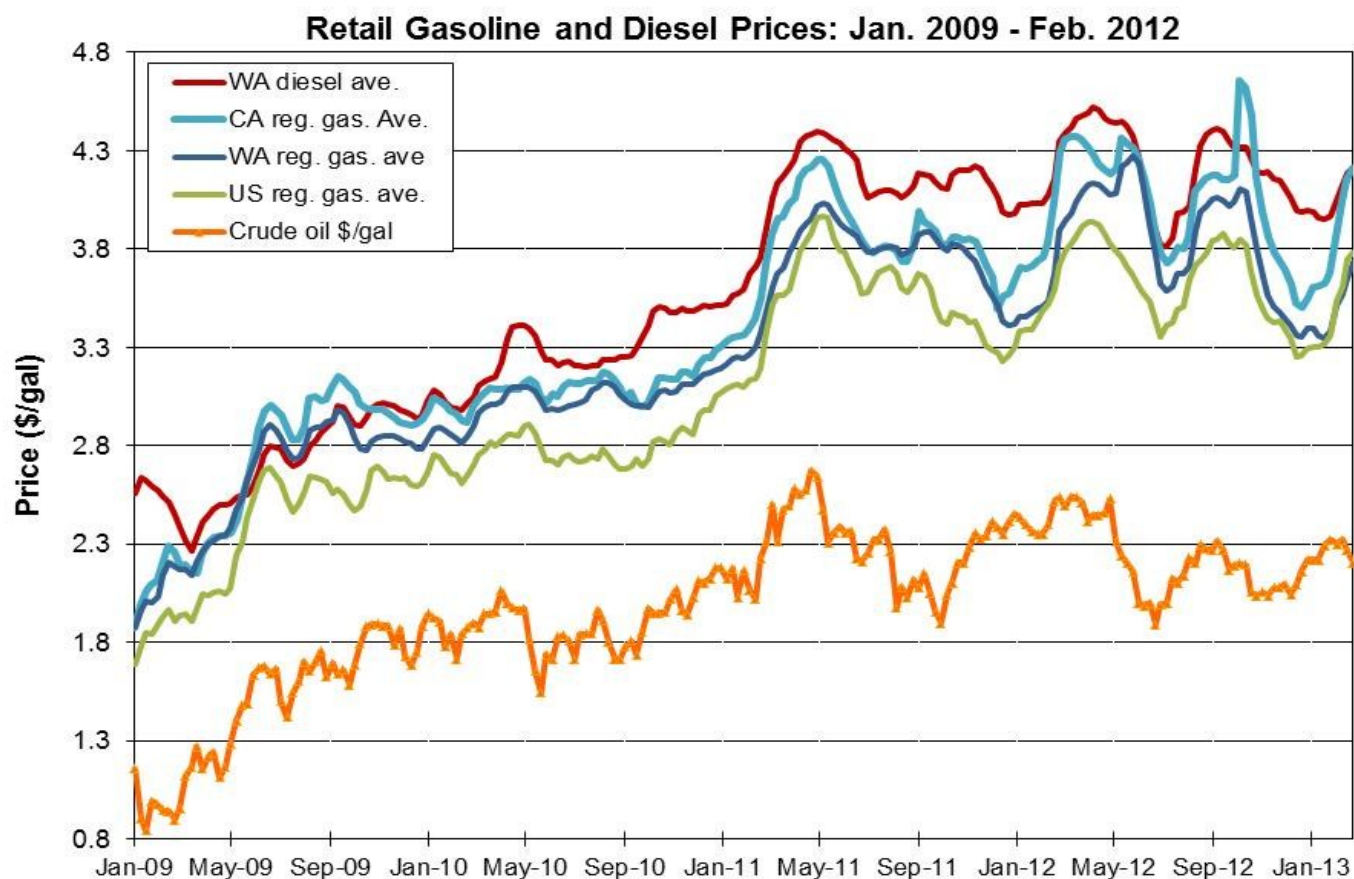
Since the January newsletter, prices for crude oil and refined products have gone in opposite directions. The crude oil WTI spot price is down \$5 to \$92.6/barrel, but this decline occurred over the last ten days. Spot prices for refined products are still elevated compared to January, but are starting to decline. NYMEX futures (March & April) prices for gasoline, diesel, heating oil, propane, gasoline, and ethanol are edging down as well. National retail gasoline and diesel prices have increased rapidly over the past month and are still trending upwards, but at a diminishing rate: national gasoline average at \$3.78/gal, up 46 cents (CA \$4.21), and diesel at \$4.16, up 23 cents /gal (CA \$4.14). National prices have risen rapidly as refiners do their maintenance and begin the switch to low vapor pressure summer blends. There are reports that a number of refiners delayed maintenance during last summer's price run-up and after Hurricane Sandy and that more plants than normal were shut-down or at partial output.

The NYMEX natural gas price (March delivery) has declined slightly in the face of continuing high storage volumes and mild weather in much of the U.S., and is currently \$3.29/MMBtu. Locally the spot price for gas at Kingsgate is up slightly: now at 3.44 \$/MMBtu, or about 17 cents. While gas prices are still low, they are up about \$1/MMBtu from this time last year.

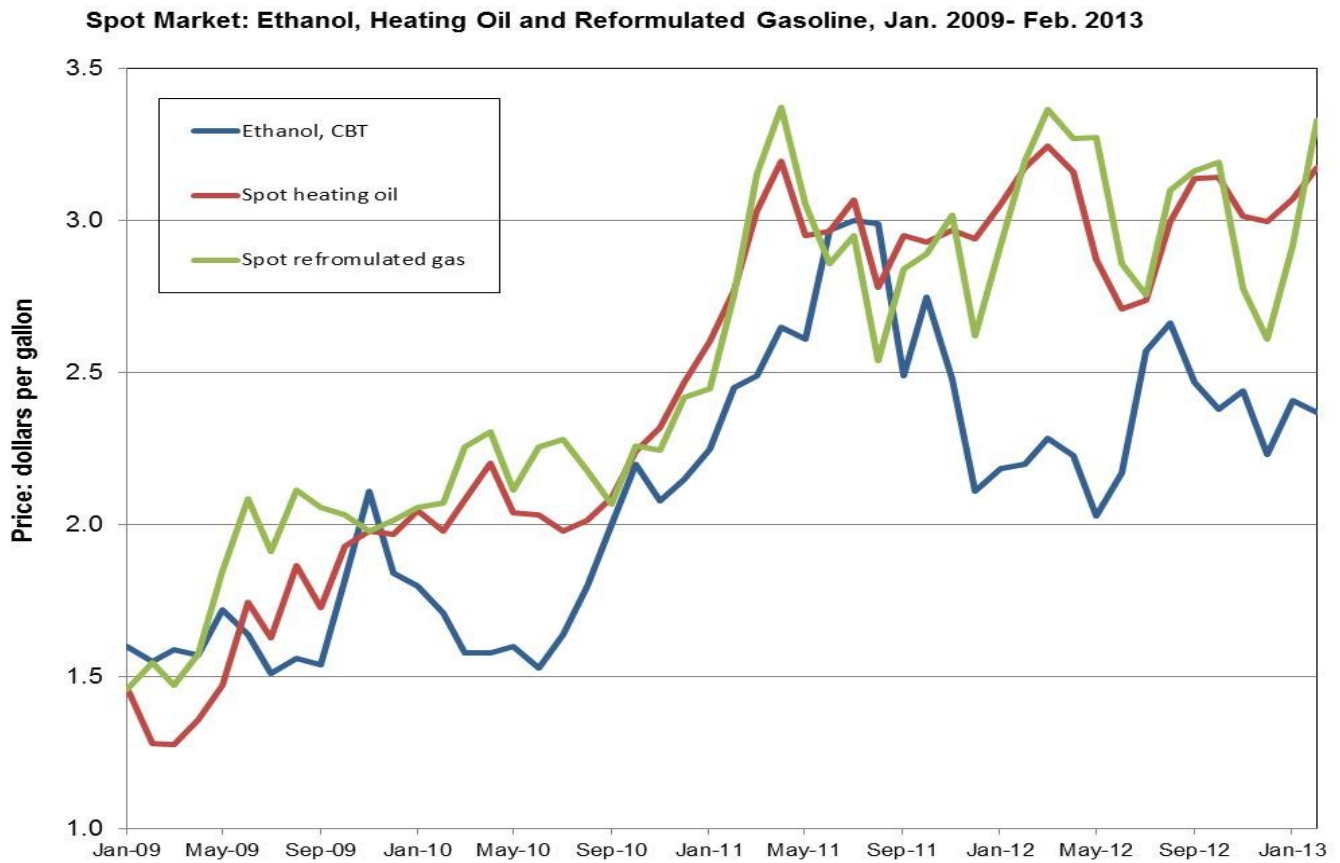
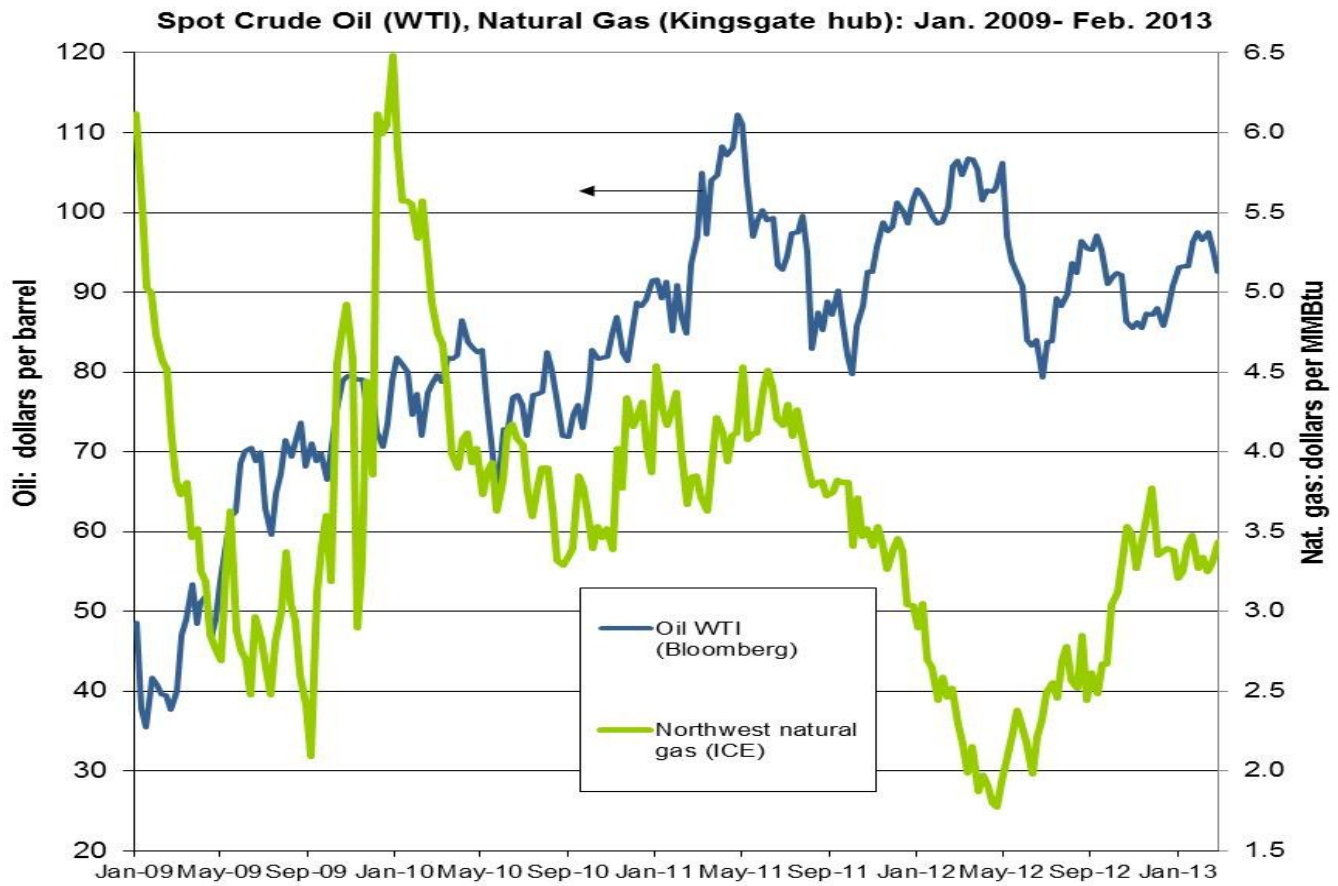
A reported gas storage draw of 171 Bcf last week is fairly typical for this time of year. The national natural gas storage figure is at 2,229 Bcf and is now 16% above the 5-year storage average. The current excess gas storage is in part leftover from low consumption during the warm winter of 2011/12.

Regional electricity spot price remained relatively low. Hydropower generation is still plentiful, and demand is relatively typical which keeps spot prices in check. The (four-week) Mid C trading hub (on-peak) price ranged from \$21-36 per MWh, and the average electricity monthly spot market price was \$29.1 per MWh, exactly the same as previous report. Thus far 2013 has been dry and the Northwest river forecast has been declining—now at 86% of normal.

Electricity, Petroleum & Natural Gas Prices



Energy Price Summary	Current	Month Ago	Year Ago
Monthly Range at Mid-C (Peak: \$ per MWh)	21-36	20-40	23-28
Average Mid C price (Peak hours \$ MWh)	29.1	29.1	24.2
Electricity WA Retail: Dec. (cents/kWh)	6.93	7.04	7.00
Natural gas spot price (next day: \$ per million BTU)	3.44	3.27	2.29
Natural gas futures (NYMEX next month: \$ per million BTU)	3.29	3.36	2.66
E85 (national average: \$ per gallon gasoline)	4.40	4.06	4.19
Ethanol (CBT next month contract: \$ per gallon)	2.37	2.41	2.20
Corn (\$ per bushel)	6.95	7.29	6.41
Petroleum, West Texas Intermediate: (\$ per barrel)	92.6	97.5	106.6
Seattle gasoline price (\$ per gallon)	3.82	3.47	3.99
Gasoline futures (NYMEX next month: \$ per gallon)	2.87	2.79	3.09
State diesel price (\$ per gallon)	4.21	3.96	4.35
Heating oil futures (NYMEX next month: \$ per gallon)	2.99	3.05	3.27
U.S. residential propane price report (resumes in Oct.)	2.49	2.47	2.87
Clean Cities: Alternative Fuel Price Report, Jan. 2012	US Avg current	West Coast last qtr avg	West Coast current qtr
Ethanol E85 (\$ per gas gallon equiv.)	4.47	5.20	4.71
Biodiesel B20 (\$ per diesel gallon equiv.)	4.13	4.50	4.27
Biodiesel B99-100 (\$ per diesel gallon equiv.)	4.88	4.91	5.08
Compressed Natural Gas (\$ per gas gallon equiv.)	2.10	2.41	2.39
Propane (\$ per gas gallon equiv.)	3.70	3.91	4.04



Become an Energy Geek

Amaze everyone around you with your knowledge of energy terms.

AFV: Alternative-Fuel Vehicle—A vehicle designed to operate on an alternative fuel (e.g., compressed natural gas, methane blend, electricity). The vehicle could be either a dedicated vehicle designed to operate exclusively on alternative fuel or a non-dedicated vehicle designed to operate on alternative fuel and/or a traditional fuel.

Btu: British thermal unit. The quantity of heat required to raise the temperature of 1 pound of liquid water by 1 degree Fahrenheit at the temperature at which water has its greatest density (approximately 39 degrees Fahrenheit).

C/gal: Cents per gallon

CDD: Cooling Degree Days. A measure of how warm a location is over a period of time relative to a base temperature, most commonly specified as 65 degrees Fahrenheit. The measure is computed for each day by subtracting the base temperature (65 degrees) from the average of the day's high and low temperatures, with negative values set equal to zero. Each day's cooling degree days are summed to create a cooling degree day measure for a specified reference period. Cooling degree days are used in energy analysis as an indicator of air conditioning energy requirements. A measure of electricity defined as a unit of work or energy, measured as 1 kilowatt (1,000watts) of power expended for 1 hour. One kWh is equivalent to 3,412 Btu or use.

Dark spread: a common metric used to estimate returns over fuel costs of coal-fired electric generators. A dark spread is the difference between the price received by a generator for electricity produced and the cost of coal needed to produce that electricity.

Fungibility is the property of a good or commodity whose individual units are capable of mutual substitution, such as crude oil, shares in a company, bonds, precious metals or currencies. It refers only to the equivalence of each unit of a commodity with other units of the same commodity

kWh: kilowatthour—A measure of electricity defined as a unit of work or energy, measured as 1 kilowatt (1,000watts) of power expended for 1 hour. One kWh is equivalent to 3,412 Btu.

Mcf: one thousand cubic feet

MMBtu: one million (10⁶) British thermal units

MWh: Megawatthour—one thousand kilowatt-hours or 1 million watt-hours

Spark spread: a common metric for estimating the profitability of natural gas-fired electric generators. The spark spread is the difference between the price received by a generator for electricity produced and the cost of the natural gas needed to produce that electricity.

VAWT: Vertical-Axis Wind Turbine—A type of wind turbine in which the axis of rotation is perpendicular to the wind stream and the ground.



River & Snow Pack Info

- Observed Jan. stream flow at The Dalles: 97% of average.
- Observed Feb. precipitation above The Dalles: 27% of average.
- Forecast runoff at The Dalles: Feb. 91% average flow
- Estimate of 2012-13 snow pack: Feb. 94% of normal.
- Federal hydropower generation in Dec.: 10,290 aMW, 2009-2013 average: 8,309 aMW.
- Reservoir content (Libby, Hungry Horse, Grand Coulee, Dworshak): Dec. 76%, 5-year average: 73%.

Power Exchanged

Average flow of power during the last 30 days
(updated on Feb. 28)

- | | |
|----------------------------|----------|
| • California (exported to) | 3,641 MW |
| • Canada (import from) | 458 MW |
| • Net power exported: | 3,183 MW |

Energy Headlines -If you only have time to read a few articles—read these.

Can Ethanol from Corn Be Made Sustainable? Scientific American, Feb. 20.

<http://www.scientificamerican.com/article.cfm?id=can-corn-ethanol-be-made-sustainable>



White House Wants \$2 billion to Give Cleaner Transport a Boost.

<http://news.yahoo.com/white-house-wants-congress-create-2-billion-green-160034206.html>



Limiting Carbon Dioxide Pollution by Power Plants. New York Times, Feb. 26.

http://www.nytimes.com/2013/02/27/opinion/the-right-way-to-curb-power-plant-emissions.html?_r=0

A Fresh Look at China's Long March on Energy Emissions. New York Times, Feb. 27.

<http://dotearth.blogs.nytimes.com/2013/02/27/a-fresh-look-at-chinas-long-march-on-energy-and-emissions/?src=recg>

The Case for a Higher Gasoline Tax. New York Times, Feb. 21.

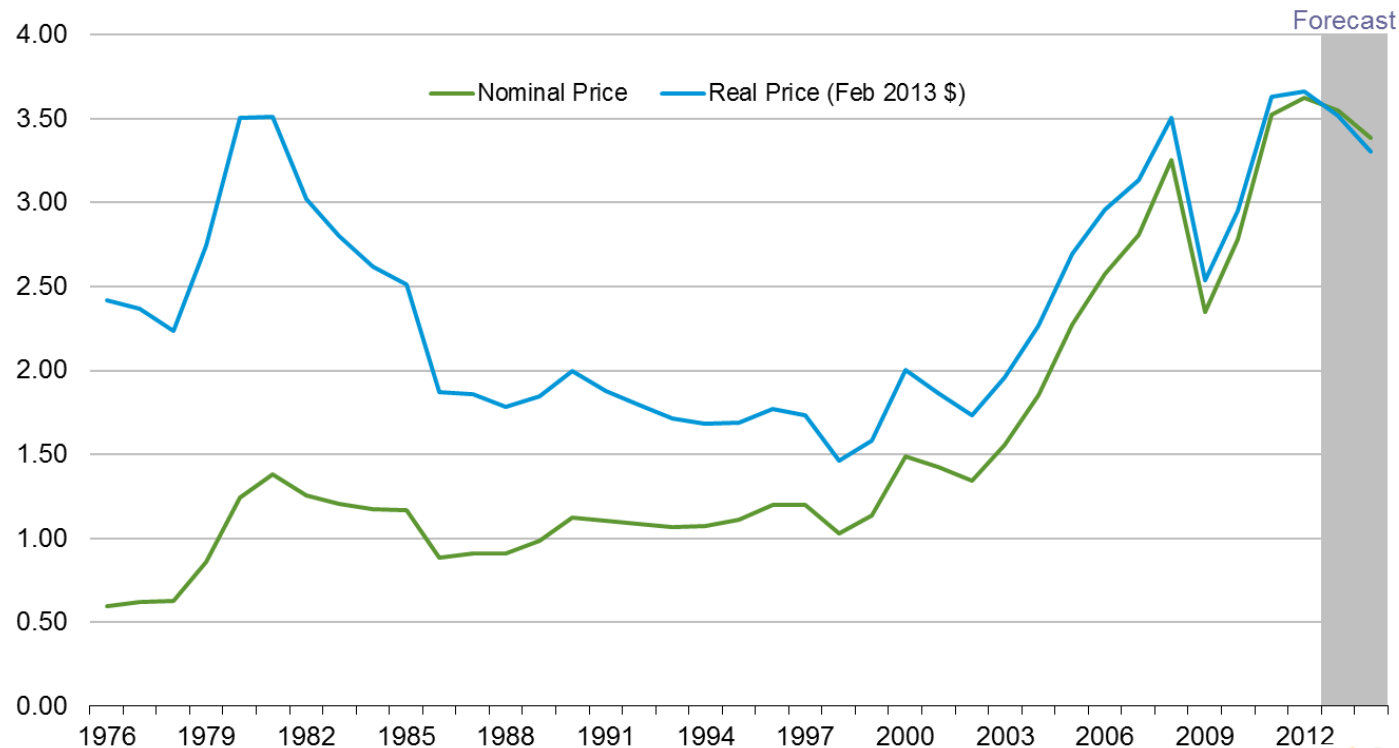
<http://www.nytimes.com/2013/02/22/opinion/the-case-for-a-higher-gasoline-tax.html>

Obama's Path from Rhetoric to Reality on Energy and Climate. New York Times, Feb. 13.

<http://dotearth.blogs.nytimes.com/2013/02/13/obamas-path-from-rhetoric-to-reality-on-energy-and-climate/>

Annual Motor Gasoline Regular Grade Retail Price

dollars per gallon



Energy Headlines continued

National

Power Plants' Carbon Dioxide Emissions Next Likely Target for EPA. Charleston Gazette.

<http://wvgazette.com/News/201302090090>

Toward a Cure for Range Anxiety. New York Times, Feb. 11.

<http://green.blogs.nytimes.com/2013/02/11/toward-a-cure-for-range-anxiety/?partner=rss&emc=rss>

On Our Radar: Prison Term for Biodiesel Fraud. NY Times, Feb. 25.

<http://green.blogs.nytimes.com/2013/02/25/on-our-radar-prison-term-for-biodiesel-fraud/?partner=rss&emc=rss>

The True Cost of Powering an Electric Car - Focus on Low Kilowatt-Hours, Not Cost Per Gallon. Edmunds Motor News.

<http://www.edmunds.com/fuel-economy/the-true-cost-of-powering-an-electric-car.html>

Net Metering Debate Rages On, Despite Calls for Calm. Renewable Energy World.

<http://www.renewableenergyworld.com/rea/news/article/2013/02/net-metering-debate-rages-on-despite-calls-for-calm?cmpid=rss>

Natural Gas Isn't the Only Reason U-S Carbon Emissions Are Falling. Washington Post.

<http://www.washingtonpost.com/blogs/wonkblog/wp/2013/02/15/natural-gas-isnt-the-only-reason-u-s-carbon-emissions-are-plummeting/>

Duke University Survey Finds More Americans Concerned About Climate Change than in Recent Years American Public Power Association

<http://www.naylornetwork.com/app-ppd/articles/index-v2.asp?aid=207150&issueID=26956>

Editors Rebel against Ratepayer Financing for Nuclear Plants. Forbes Magazine.

<http://www.forbes.com/sites/jeffmcmahon/2013/02/20/editors-rebel-against-ratepayer-financing-for-nuclear-plants/>

Tennessee Valley Authority, B&W Sign Small Modular Reactor Agreement under DOE Program. American Public Power Association.

<http://www.naylornetwork.com/app-ppd/articles/index-v2.asp?aid=208002&issueID=26958>

In New England, a Natural Gas Trap. NY Times.

<http://www.nytimes.com/2013/02/16/business/electricity-costs-up-in-gas-dependent-new-england.html>

Flipping The Switch: What it Takes to Prioritize Electric Cars. National Public Radio.

<http://www.npr.org/blogs/thetwo-way/2013/02/23/172778466/flipping-the-switch-what-it-takes-to-prioritize-electric-cars?ft=1&f=2>

California's Second Carbon Permit Auction Beats Expectations. San Jose Mercury News.

http://www.mercurynews.com/rss/ci_22650233

Congress Should Aim for Greenhouse Gas Reductions in Energy Bills That Address Other Topics, APPA Says American Public Power Association.

<http://www.naylornetwork.com/app-ppd/articles/index-v2.asp?aid=208191&issueID=26960>

Northwest

Washington State's Renewable Energy Law. KNDU-TV, Tri-Cities, Feb. 11

<http://www.nbcrightnow.com/story/21089485/sen-brown-aiming-to-loosen-restrictions-on-utility-companies-lower-costs>

Too Much Wind Power - PacifiCorp Agrees to Work on Real-Time Energy Imbalance System. Oregonian

http://www.oregonlive.com/business/index.ssf/2013/02/pacificorp_agrees_to_work_on_r.html

Washington State Lawmakers Seek Changes to Clean-Energy Law. Associated Press.

http://www.oregonlive.com/environment/index.ssf/2013/02/washington_lawmakers_seek_chan.html

Puget Sound Energy Wind Farms Post New One-Day Generating Record. BusinessWire.

http://www.businesswire.com/portal/site/moreover/index.jsp?ndmViewId=news_view&ndmConfigId=1000027&newsId=20130214006635&newsLang=en

Dimming Future for Large Solar Projects in Oregon as Incentives Dry Up. Oregonian, Portland.

http://www.oregonlive.com/business/index.ssf/2013/02/dim_future_for_large_solar_pro.html

Lawmakers to Propose Ten Cent per Gallon Gas Tax Hike for Washington State. KING-TV.

<http://www.king5.com/news/local/10-cent-gas-tax-hike-for-Washington-191812781.html>

Inslee to Environmental Activists: State Will Trigger 'International Revolution' on Energy Policy. Seattle Times.

<http://blogs.seattletimes.com/politicsnorthwest/2013/02/19/inslee-declares-international-revolution-coming-over-energy-policy/>

U-S Senator Ron Wyden: Hanford Will be Priority for Next Energy Secretary. Northwest Public Radio.

<http://nwpr.org/post/sen-wyden-hanford-will-be-priority-next-energy-secretary>

Washington State Investment Board Admits Alternative Energy Not a Good Investment. Seattle Times.

<http://blogs.seattletimes.com/opinionnw/2013/02/21/alternate-energy-a-good-investment/>

Why Is Gaia Angry With Me? Baby Boomers Produce Highest Carbon Emissions. NY Times.

<http://www.nytimes.com/2013/02/15/booming/baby-boomers-produce-highest-carbon-emissions.html?partner=rss&emc=rss>

Traditionally Green Strategists Now Pushing Pacific Northwest Coal Ports. Seattle Times.

http://seattletimes.com/html/localnews/2020421425_coalstrategistsxml.html

Snohomish PUD's Studies Support Proposed Mini-Dam on Skykomish River. Everett Herald.

<http://www.heraldnet.com/article/20130225/NEWS01/702259932/1038/COMM0601>

Recent Reports on Energy and Climate Change

Short-term Energy Outlook, EIA Feb. 2013.: <http://www.eia.gov/forecasts/steo/>

This Week in Petroleum. EIA, Feb. 2013.: <http://www.eia.gov/oog/info/twip/twip.asp>

Annual Energy Outlook 2013 Early Release: <http://www.eia.gov/forecasts/aeo/er/>

Environmental Protection Agency 2012 Climate Change Indicators Report.

<http://www.epa.gov/climatechange/science/indicators/>

World Energy Outlook 2012—Summary, International Energy Administration.

<http://www.worldenergyoutlook.org/publications/weo-2012/>

Electricity Storage, Energy Information Administration, July 2012

http://www.eia.gov/todayinenergy/detail.cfm?id=6910#tabs_ElecStorage-1

Oil: The Next Revolution. Belfer Center for Science, Harvard Kennedy School, June 2012

<http://belfercenter.ksg.harvard.edu/publication/22144/oil.html>

Leading Companies Contradict Own Actions on Climate Science. Union of Concerned Scientists, May 2012.

http://www.ucsusa.org/news/press_release/corporate-climate-report-0390.html

Annual Energy Outlook 2012 Early Release. Energy Information Administration, Jan. 2012

<http://www.eia.gov/forecasts/aeo/er/?src=email>

Report on the First Quadrennial Technology Review, US Dept of Energy

<http://energy.gov/downloads/report-first-quadrennial-technology-review>

Understanding Household Preferences for Alternative- Fuel Vehicle Technologies. Mineta Transportation Institute. <http://www.transweb.sjsu.edu/project/2809.html>

Residential Energy Consumption Survey: 2009, Energy Information Administration, Mar 2011.

<http://www.eia.doe.gov/consumption/residential/reports/electronics.cfm>

Greenhouse Gas (GHG) Emissions

The federal Environmental Protection Agency (EPA) has a great interactive map of emissions from large facilities. It can be browsed at <http://www.epa.gov/ghgreporting/> Below are the heaviest emitters in the state for 2011.

Facility	City	Total Reported Emission (metric tons CO ₂ e)	Sectors
TransAlta Coal Plant Centralia	CENTRALIA	5,623,544	Power Plants
BP CHERRY POINT REFINERY	BLAINE	2,429,027	Refineries, Chemicals
SHELL PUGET SOUND REFINERY	ANACORTES	2,085,203	Refineries
TESORO CORPORATION-ANACORTES REFINERY	ANACORTES	1,164,665	Refineries
PHILLIPS 66 FERNDALE REFINERY	FERNDALE	1,004,379	Refineries
ALCOA INTALCO WORKS	FERNDALE	989,214	Metals
Puget Sound Energy LDC	Bellevue	665,944	Petroleum and Natural Gas Systems
WEYERHAEUSER NR COMPANY	LONGVIEW	399,833	Pulp and Paper
River Road	VANCOUVER	394,096	Power Plants
ASH GROVE CEMENT COMPANY-SEATTLE	SEATTLE	311,893	Minerals
ALCOA INC WENATCHEE WORKS	MALAGA	301,364	Metals
Chehalis Generation Facility	CHEHALIS	280,937	Power Plants
Mint Farm Generation Station	Longview	277,329	Power Plants
ROOSEVELT REGIONAL LANDFILL	ROOSEVELT	240,657	Waste
GOLDENDALE GENERATING STATION	GOLDENDALE	219,546	Power Plants
LONGVIEW FIBRE PAPER AND PACKAGING, INC	LONGVIEW	186,053	Pulp and Paper
Cosmopolis Pulp Mill	Cosmopolis	178,520	Waste, Pulp and Paper
Georgia Pacific Consumer Products Camas LLC	CAMAS	173,195	Waste, Pulp and Paper
LAND RECOVERY LANDFILL INDUST	GRAHAM	160,436	Waste
WaferTech LLC	Camas	157,324	Other
US OIL & REFINING TACOMA	TACOMA	147,116	Refineries
SIMPSON TACOMA KRAFT CO LLC	TACOMA	138,477	Pulp and Paper
KING CNTY SOLID WST CEDAR HILLS LANDFILL	MAPLE VALLEY	137,797	Waste
NUCOR STEEL SEATTLE INC	SEATTLE	134,332	Metals
BOISE WHITE PAPER LLC	WALLULA	122,708	Waste, Pulp and Paper
REC SOLAR GRADE SILICON	MOSES LAKE	120,765	Metals
Grays Harbor Energy Center	Elma	119,764	Power Plants
AGRIUM US INC - KFO	KENNEWICK	114,977	Chemicals
PORT TOWNSEND PAPER CORP	PORT TOWN- SEND	110,223	Pulp and Paper
Kaiser Aluminum Washington	Spokane Valley	108,432	Metals
Cardinal FG Company	Winlock	107,454	Minerals
Frederickson Power LP	TACOMA	106,914	Power Plants
GRAYMONT WESTERN US INC	TACOMA	105,669	Minerals
KIMBERLY CLARK WORLD WIDE	EVERETT	102,944	Pulp and Paper
WHEELABRATOR SPOKANE	SPOKANE	100,646	Waste

Although every URL is checked for accuracy prior to publication, URLs are subject to change for various reasons.

State Energy Office
1011 Plum St SE
Mail Stop: 42525
Olympia WA 98504 2525

Phone: 360.725.3112

Email:
energy_policy@commerce.wa.gov

Renewable Energy added in U.S. during January 2013

By Tony Usibelli, Washington State Energy Office —

One month doesn't make a trend, but this is a pretty remarkable development nonetheless.

Renewable energy - including wind, solar and biomass resources - accounted for all new generating capacity added in the U.S. in January, according to the Federal Energy Regulatory Commission's (FERC) latest [Energy Infrastructure Update](#).

The 1.231 GW of new U.S. electrical generating capacity entering service in January represented nearly a threefold increase in new renewable energy generating capacity compared to January 2012, when wind, solar and biomass provided 431 MW of new capacity.

Wind energy accounted for the largest share of the new capacity in January, with six new units providing 958 MW, followed by 16 units of solar (267 MW) and six units of biomass (6 MW). No new generating capacity was reported for any fossil fuel (i.e., natural gas, coal, oil) or nuclear power sources.

Renewable sources now account for 15.66% of total installed U.S. operating generating capacity, and wind energy represents 5.17% of the total. Other renewable resources include water (8.5%), biomass (1.29%), solar (0.38%) and geothermal (0.32%). In comparison, natural gas accounts for 42.37% of total operating generating capacity, followed by coal (29.04%), nuclear (9.23%) and oil (3.54%).

Total installed Operating Generating Capacity in US as of January 2013

